

**CHEMICAL MECHANICAL POLISHING SLURRY COMPOSITION FOR
SHALLOW TRENCH ISOLATION PROCESS OF SEMICONDUCTOR**

ABSTRACT

-- The present invention is related to a chemical-mechanical polishing slurry for shallow trench isolation, more concretely, to a chemical-mechanical polishing slurry comprising an aqueous abrasive solution comprised of deionized water, polishing particles, and a polishing particle dispersant; and an aqueous additive solution comprised of a carboxylic acid polymer compound, a nitrogen-containing organic cyclic compound, and an amine-group compound. The removal selectivity of the slurry may be improved by signifacantly lowering the speed of polishing of nitride film by adding a nitrogen-containing organic cyclic compound to an acrylic acid polymer compound, and by increasing the speed of removal of silicon oxide film by adding an amine-group compound, which is an accelerator of hydrolysis of silicon oxide film. --